

**WHAT IS CLAIMED IS:**

1. An image sensor to be mounted to a printed circuit board, the image sensor comprising:

a substrate having an upper surface formed with a plurality of first  
5 connection points, and a lower surface formed with a plurality of second connection points, which is electrically connect to the printed circuit board;

a photosensitive chip mounted to the upper surface of the substrate;

a plurality of wires for electrically connecting the photosensitive chip to the first connection points on the upper surface of the substrate; and

10 a frame layer mounted to the upper surface of the substrate to surround the photosensitive chip, and a transparent layer being fixed and encapsulated by the frame layer such that the photosensitive chip may receive optical signals passing through the transparent layer.

2. The image sensor according to claim 1, wherein the frame layer is made  
15 of industrial plastic material by way of injection molding to encapsulate the transparent layer.

3. The image sensor according to claim 1, wherein the transparent layer is a piece of transparent glass.

4. A method for manufacturing an image sensor, comprising the steps of:  
20 providing a substrate having an upper surface formed with a plurality of first

connection points, and a lower surface formed with a plurality of second connection points, which is electrically connect to the printed circuit board;

mounting a photosensitive chip to the upper surface of the substrate;

providing a plurality of wires for electrically connecting the photosensitive  
5 chip to the first connection points on the upper surface of the substrate; and

mounting a frame layer to the upper surface of the substrate so as to  
surround the photosensitive chip, and a transparent layer is fixed and encapsulated  
by the frame layer such that the photosensitive chip may receive optical signals  
passing through the transparent layer.

10 5. The method according to claim 4, wherein the frame layer is made of  
industrial plastic material by way of injection molding to encapsulate the  
transparent layer.

6. The method according to claim 4, wherein the transparent layer is a piece  
of transparent glass.

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